APPENDIX A - WEATHER AND IMPACT FORECASTS

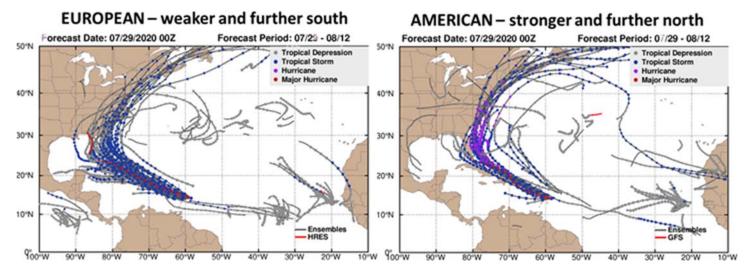
Subject: FW: Potential Tropical Cyclone Nine

From: Cerruti, Brian J	<	>			
Sent: Wednesday, July	y 29, 2020 9:13 AM				
To: Sniffen, Matthew	<	>; Lewis, Catherine <		>; White, Julius	
<	>; Brennan, James <		>; Hellen, Antonis <	>; Ra	gona
Jason <	>; dl - STO Ser	nior Sys. Operators			
Subject: Potential Tro	pical Cyclone Nine				

Hello everyone,

There is a tropical wave currently located about 300 miles southeast of Puerto Rico. Putting the fascinating structural aspects of this system aside, the National Hurricane Center is tracking this feature closely and has assigned it an intensity of 40 kts (45 mph – supported by satellite estimates and wind observations across the Leeward Islands). This is strong enough to become Tropical Storm Isaias, and long story short, will likely be designated as such later today.

The tracks of this system are below...



These are my takeaways from each image:

- 1. EUROPEAN MODEL (FAVORITE):
 - a. Tracks are further south, more likely to interact with the rugged terrain over Hispaniola and eastern Cuba
 - b. This is likely to result in a weaker system.
 - c. The system might dissipate before arriving in Florida under this scenario
- 2. AMERICAN MODEL:
 - a. Tracks are further north, less likelt to interact with the rugged terrain
 - b. This is likely to result in a stronger system
 - c. Such a northern track and stronger system may curve out to sea before reaching the east coast.

MY FORECAST:

I will be watching this system closely over the coming days. It is likely to become Tropical Storm Isaias later today south of Puerto Rico and is also likely to track across Hispaniola as a Tropical Storm on Thursday. It will then quickly track across either the Turks and Caicos Islands or eastern Cuba Friday. This system, if it does not dissipate, would likely affect Florida Saturday into Sunday while turning more north.

If it survives this journey without dissipating, (and that is a big IF this far out), this system, or its remnants, could enter the NYC area as early as Monday night (8/3). Confidence is very, very low in the forecast at this time, but that would put the 120 hour mark for arrival of TS winds at around 2000 tonight in the worst case scenario.

I will provide updates as new information becomes available, and at minimum once per day. Let me know if you have any questions,

-Brian

Brian Cerruti
Meteorologist
System & Transmission Operation
Phone:

Phone: Cell: Alt:

Sent: Thursday, July 30, 2020 9:32 AM

To: dl - Weather Risk Assessment; dl - STO - Weather Forecast

Subject: Weather Risk Assessment and Forecast 7/30/2020

MAIN POINTS:

1. The last day of the hat wave is expected today:

a. TODAY: TV of 82 – 83 with highs near 92.

b. Confidence is high in the forecast.

Weather Forecast for 7/30/2020

Day	Morning Low	Afternoon High	Winds (mph)	Clouds/Weather		
Today	-	87-92	5-15 gusts to 20	Mostly cloudy with isolated showers and		
				thunderstorms after 1800.		
Friday	O&R: 68-73	83-88	5-15 gusts to 20	Cloudy with showers and isolated thunderstorms in		
inday	NYC: 73-78	03 00	3 13 gasts to 20	the morning, then decreasing clouds.		
Saturday	O&R: 65-70	83-88	E 1E quete to 20	Increasing clouds		
Saturday	NYC: 70-75	03-00	5-15 gusts to 20	Increasing clouds.		
Cundou	O&R: 62-67	80-85	E 1E quete to 20	Mostly cloudy skies with scattered showers and		
Sunday	NYC: 67-72	80-85	5-15 gusts to 20	thunderstorms.		
Monday	O&R: 62-67	80-85	E 1E quete to 20	Mostly cloudy with scattered showers in the		
ivioliday	NYC: 67-72	80-85	5-15 gusts to 20	morning.		
Tuesday	O&R: 62-67	80-85	E 1E quete to 20	Mostly cloudy with isolated showers and		
Tuesday	NYC: 67-72	00-05	5-15 gusts to 20	thunderstorms.		
Wednesday	O&R: 62-67	80-85	E 1E guete to 20	Mostly cloudy with isolated showers and		
vveunesday	NYC: 67-72	ου-δ ວ	5-15 gusts to 20	thunderstorms.		

SYNOPSIS:

Expect increasing clouds today with highs in the low 90s and scattered showers and thunderstorms arriving after 1800 as a cold front crosses the area. This front will slowly exit the area Friday afternoon, resulting in cloudy skies with scattered showers and isolated thunderstorms Friday morning, then decreasing clouds in the afternoon and evening.

Increasing clouds are expected Saturday as a broad low pressure area approaches the region. Mostly cloudy skies are expected Sunday through Wednesday as this system stalls near the area. This will result in mostly cloudy skies with scattered showers and thunderstorms Sunday into Wednesday. Tropical Storm Isaias, or its remnants, may interact with this stalled low pressure system, please see the Tropical Update for more information.

TROPICAL UPDATE:

Tropical Storm Isaias developed about 200 miles south of Puerto Rico last night and is currently located about 140 miles southwest of San Juan, PR. This system will cross Hispaniola today as a Tropical Storm and will likely weaken. If it survives, it is expected to re-strengthen while crossing the Turks and Caicos islands Friday and Bahamas Saturday. Confidence in Isaias's track then decreases as it approaches the coast of Florida Sunday. The latest information suggests Isaias or its remnants are likely to be absorbed by a low pressure system stalled across the Midwestern U.S., which opens the door to a coastal track. Confidence is low in Isaias's exact track and there is potential for it to affect the Con Edison area in the middle of next week.

		Weather Ris	k Assessme	nt		
COMPANY TRIGGERS	Thursday	Friday	Saturday Sunday		Monday	Tues day
COMPANT I RIGGERS	7/30/2020	7/31/2020	8/1/2020	8/2/2020	8/3/2020	8/4/2020
		Tempera	ture Variable			
TV > 82°F	82 - 83	1				10
		Thund	lerstorms			
T-Storms / Lightning	Scattered 1800 - 2300	Isolated 0000 - 1200		Scattered	Scattered	Scattered
Co	lor Legend: C	onfidence the	e trigger will t	e met or exc	eeded	
Trigger Not Expected To Occur	Low Cor Trigger			Confidence Occurs	400 C M C C C C C C C C C C C C C C C C C	nfidence Occurs

Impact Summary

STEAM SYSTEM IMPACT:

No Steam system impacts are expected.

OVERHEAD IMPACT:

No overhead system impacts are expected

UNDERGROUND IMPACT:

No underground system impacts are expected.

Weather Risk Assessment and Impact Summary Prepared By:

Brian Cerruti | Meteorologist | Con Edison SystemOperations |:

From: Cerruti, Brian J

Sent: Thursday, July 30, 2020 9:35 AM

To:

Subject: *CORRECTION* Tropical Storm Isaias Update 7/30/2020

PLEASE SEE CORRECTION ON NUMBERED SCENARIOS; 1 and 3 were reversed in the original...

Hello everyone,

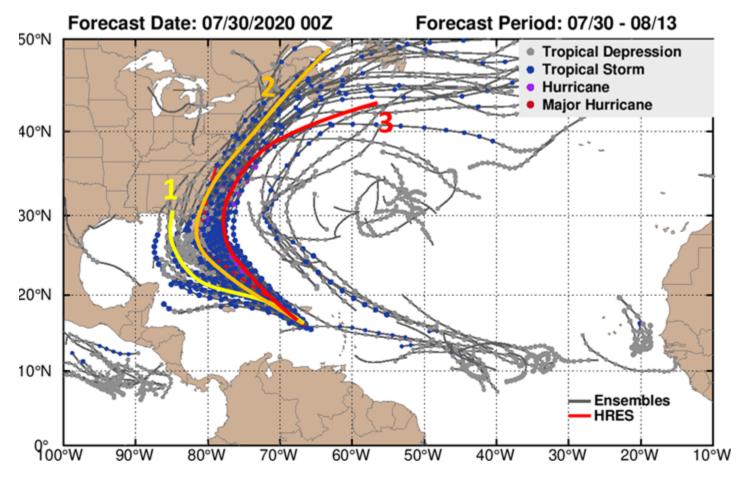
Isaias finally developed south of Puerto Rico last night and is currently approaching Hispaniola. This system will quickly cross Hispaniola as a Tropical Storm this afternoon and evening. Hispaniola has a lot of mountains and there is a chance Isaias is ripped apart and dissipates later today as a result. However, due to Isaias's high forward speed and relatively large size, I expect it to survive Hispaniola.

Confidence is high in Isaias's track through Sunday thanks to very strong and pronounced steering currents:

- Today: Cross Hispaniola, likely as a Tropical Storm, weakening during land interation
- **Friday**: Cross Turks and Caicos islands, likely intensifying.
- Saturday: Cross the Bahamas, possibly intensifying into a hurricane but conditions are not ideal for strengthening.
- Sunday: Approach Florida coast and slow down... here is where confidence rapidly decreases in the track

Beyond Sunday, there are three main track options, partially a function of intensity (**NUMBERS CORRESPOND TO THE MAPPED TRACKS BELOW, overlaid with the European Ensemble member predictions**):

- 1. **(UNLIKELY)** Isaias takes a southerly track as a weaker storm, affected by Hispaniola's and also Cuba's mountains, and dissipates after crossing Florida.
- 2. (MOST LIKELY) Isaias maintains Tropical Storm strength, hits Florida Sunday, then tracks up the coast while weakening through early next week.
- 3. (UNLIKELY) Isaias intensifies into a hurricane before affecting Florida and curves out to sea.



The most likely track (#2 above) would bring Isaias over or very close to Florida Sunday while slowing down temporarily. Conditions are expected to be marginal for intensification, so it is likely to remain a Tropical Storm or weaken due to land interaction while being dragged up the coast. In this scenario, the Con Edison area would see periods of heavy rain and breezy winds along the coast, similar to what happened when Tropical Storm Fay crossed the area earlier this season. It is too early to determine if Tropical Storm force winds will occur across the area, but the earliest arrival time of the worst case scenario is roughly 1200 on Tuesday, 8/4/2020. Therefore, by noon today it appears we will be at the earliest possible 120 hour window.

Confidence is still low this far out. There remains a lot of uncertainty in how Isaias will interact with Hispaniola. After Isaias is clear of Hispaniola by tomorrow, confidence in the track is expected to increase.

Updates will be sent as needed, and at minimum once per day. Please let me know if you have any questions. -Brian

Brian Cerruti
Meteorologist
System & Transmission Operation
Phone:
Cell:

Alt:

Sent: Friday, July 31, 2020 9:06 AM

To: Sniffen, Matthew; Hellen, Antonis; Brennan, James; Ragona, Jason; dl - STO Senior Sys. Operators;

Lewis, Catherine; White, Julius; Columbia, Thomas; Burke, Patrick; Cerruti, Brian J

Subject: Hurricane Isaias Update 7/31/2020

Hello everyone,

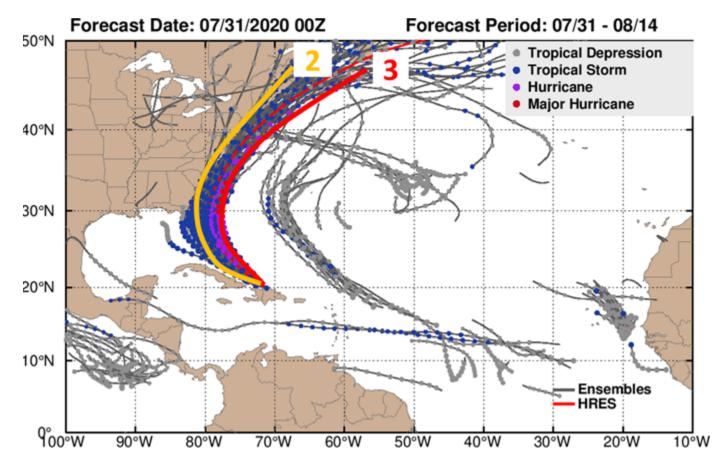
Isaias quickly crossed Hispaniola yesterday, and has already strengthened into a Category 1 hurricane. It is currently located 500 miles southeast of Miami, FL, and will track west northwest over the next few days.

Confidence is high in Isaias's track through Sunday thanks to very strong and pronounced steering currents:

- Today: Cross Turks and Caicos islands, likely intensifying.
- **Saturday:** Cross the Bahamas, intensity peaking/leveling off.
- Sunday: Approach Florida coast and slow down... here is where confidence rapidly decreases in the track

Beyond Sunday, there are now two main track options (roughly equally likely to occur), mainly a function of intensity (NUMBERS CORRESPOND TO THE MAPPED TRACKS BELOW, overlaid with the European Ensemble member predictions):

- 1. (NOT EXPECTED) Isaias takes a southerly track as a weaker storm, affected by Hispaniola's and also Cuba's mountains, and dissipates after crossing Florida.
- 2. (LIKELY) Isaias maintains Category 1 hurricane strength and sideswipes Florida Sunday, then hugs the coast Monday into Wednesday while weakening. Our area would see heavy rainfall and possibly gusty winds and system impact similar to Tropical Storm Fay on 7/10/2020.
- 3. (MORE LIKELY) Isaias continues to intensify and turns before affecting Florida Sunday, then curves out to sea through next week. Our area would see some rain but no impact.



Some combination of tracks 2 and 3 is most likely to occur. This would result in potential for heavy rainfall, but keep impactful winds offshore and away from the Con Edison / O&R area. If Tropical Storm force winds do occur across the area, the arrival time of the worst case scenario is roughly 1200 on Tuesday, 8/4/2020. Therefore, by noon today it appears we will be at the 96 hour window. THIS IS SUBJECT TO CHANGE BASED ON ISAIAS'S FORWARD SPEED, WHICH IS LOW CONFIDENCE AT THIS TIME.

There remains a lot of uncertainty in how Isaias will interact with Florida, but confidence is high Isaias will track up the coast. However, confidence is still low in exactly how Isaias will affect our area (if at all).

Updates will be sent as needed, and at minimum once per day. Please let me know if you have any questions. -Brian

Brian Cerruti
Meteorologist
System & Transmission Operation
Phone:

Cell: Alt:

Sent: Friday, July 31, 2020 9:47 AM **To:** dl - Weather Risk Assessment

Subject: Weather Risk Assessment and Forecast 7/31/2020

MAIN POINTS:

- 1. Hurricane Isaias is expected to track up the coast Monday into Wednesday while weakening:
 - a. Confidence is still low in this system's exact track and intensity.

b. Heavy rain and gusty winds are possible if the track shifts further west.

Weather Forecast for 7/31/2020

Day	Morning Low	Afternoon High	Winds (mph)	Clouds/Weather
Today	-	77-82	5-15 gusts to 20	Cloudy with showers in the morning, then decreasing clouds.
Saturday	O&R: 65-70 NYC: 70-75	83-88	5-15 gusts to 20	Increasing clouds with isolated showers after 2000.
Sunday	O&R: 67-72 NYC: 72-77	82-87	5-15 gusts to 20	Cloudy skies with scattered showers and thunderstorms before 1200, then decreasing clouds.
Monday	O&R: 65-70 NYC: 70-75	83-88	5-15 gusts to 20	Increasing clouds with periods of rain arriving late.
Tuesday	O&R: 62-67 NYC: 67-72	78-83	O&R: 5-15 gusts to 25 NYC: 15-25 gusts to 35	Cloudy with periods of rain and embedded thunderstorms.
Wednesday	O&R: 62-67 NYC: 67-72	80-85	5-15 gusts to 20	Cloudy with periods of rain in the morning, then decreasing clouds.
Thursday	O&R: 62-67 NYC: 67-72	80-85	5015 gusts to 20	Partly cloudy.

SYNOPSIS:

Expect cloudy skies with scattered showers and this morning, then decreasing clouds in the afternoon and evening as a colds front exits the area. Increasing clouds are expected Saturday as a broad low pressure area approaches the region, with isolated showers arriving after 2000. Cloudy skies and scattered showers and thunderstorms are expected Sunday morning as a warm front lifts across the area. Decreasing clouds are then anticipated Sunday afternoon. A cold front and broad low pressure system will then approach the area Monday, resulting in increasing clouds with periods of rain arriving late.

Hurricane Isaias will interact with this system, possibly affecting our area Tuesday with the primary threat being heavy rainfall – see the Tropical Update for more information. Behind this system, expect decreasing clouds Wednesday evening and then partly cloudy skies Thursday as the system exits the area.

TROPICAL UPDATE:

Isaias quickly crossed Hispaniola yesterday and is currently located about 500 miles southeast of Miami, FL and has strengthened to a Category 1 hurricane. This system will cross the Turks and Caicos islands today and Bahamas tonight into Saturday while strengthening slightly, then approach the Florida coast Sunday. Isaias will then be absorbed by a low pressure system stalled across the Midwestern U.S., which will force the storm to track up the coast. While confidence is high Isaias will track up the eastern U.S. coast, confidence in its exact track and intensity remains low at this time.

		Weather F	tisk Assessme	ent		
COMPANY TRIGGERS	Friday 7/31/2020	Saturday 8/1/2020	Sunday 8/2/2020	Monday 8/3/2020	Tues day 8/4/2020	Wednesday 8/5/2020
2		Pre	ecipitation			
Rain Trigger (3/4" in 3 hours)		1000				
i		Thui	nderstorms			
T-Storms / Lightning			Scattered 0000 - 1200		Isolated	
	,	Non-Thur	derstorm Wind	s		
Sustained Winds > 25 mph					NYC: Up to 25 mph	
Wind Gusts > 35 mph					NYC: Up to 35 mph	
C	olor Legend:	Confidence t	he trigger will	be met or ex	ceeded	
Trigger Not Expected To Occur	Low Cor Trigger		Medium Co Trigger		High Conf Trigger 0	

		Ove	rhead Imp	act Model	s		
USE CO	OLOR FOR	Friday	Saturday	Sunday	Monday	Tuesday	Wednesda
CONFIDE	NCE LEVEL	7/31/2020	8/1/2020	8/2/2020	8/3/2020	8/4/2020	8/5/2020
			Brooklyn/G	Queens			
	ed Job Range					Watching	
(LOW - EX	pected - High)	4000	40000	4000	4.0.00/	Isaias	4000
D b b E	Routine (< 20)	100%	100%	100%	100%	100%	100%
Probability of	Upgraded (20 - 49)	0%	0%	0%	0%	0%	0%
Impact Level	Serious (50 - 250)	0%	0%	0%	0%	0%	0%
	Full Scale (> 250)	0%	0,10		0%	0%	0%
			Bronx/West	cnester			p
	ed Job Range spected - High)					Watching Isaias	0
	Routine (< 30)	100%	100%	100%	100%	100%	100%
Probability of	U pgraded (30 - 109)	0%	0%	0%	0%	0%	0%
Impact Level	Serious (1 10 - 549)	0%	0%	0%	0%	0%	0%
0.89	Full Scale (> 550)	0%	0%	0%	0%	0%	0%
			Staten Is	la nd			
	ed Job Range pected - High)					Watching Isaias	
	Routine (< 7)	100%	100%	100%	100%	100%	100%
Probability of	Upgraded (7 - 17)	0%	0%	0%	0%	0%	0%
Impact Level	Serious (18 - 59)	0%	0%	0%	0%	0%	0%
	Full Scale (> 60)	0%	0%	0%	0%	0%	0%
		7	Orange and I	Rockland			
	ed Job Range pected - High)					Watching Isaias	
	Routine (< 40)	100%	100%	100%	100%	100%	100%
Probability of Impact Level	Upgraded (40 -80)	0%	0%	0%	0%	0%	0%
	Serious (80 - 330)	0%	0%	0%	0%	0%	0%
	Full Scale (> 330)	0%	0%	0%	0%	0%	0%
			Color Le	gend:			
Note	Expected	LowCor	rfidence	Mediu m C	onfidence	High Co	nfid ence

Impact Summary

STEAM SYSTEM IMPACT:

Periods of heavy rain are possible Monday evening into Tuesday as Hurricane I saias makes its closest pass with our area. If the track shifts further west, a Rain Trigger would be possible Monday night into Tuesday. Confidence is low in the forecast at this time.

OVERHEAD IMPACT:

All eyes are currently on Hurricane Isaias and how close it will track to our area. Based on the latest information, the track will be far enough offshore that no overhead impact is expected. However, a shift to the west would bring higher winds and a much better chance of impact. Confidence is low in the weather and impact forecast at this time, but overhead impact is possible if Isaias shifts further west.

UNDERGROUND IMPACT:

No underground system impacts are expected.

Weather Risk Assessment and Impact Summary Prepared By:

Brian Cerruti | Meteorologist | Con Edison System Operations |:

Sent: Saturday, August 1, 2020 9:28 AM

To: Hellen, Antonis; Brennan, James; Ragona, Jason; Lewis, Catherine; Sniffen, Matthew; Alvarado, Walter;

Lewis, Catherine; White, Julius; Columbia, Thomas; Smith, Stuart H. (Emerg. Prep.); Diaz-Middleton,

Yvette; Hanebuth, Michele; Peverly, Frank; Sanchez, Robert; Cerruti, Brian J

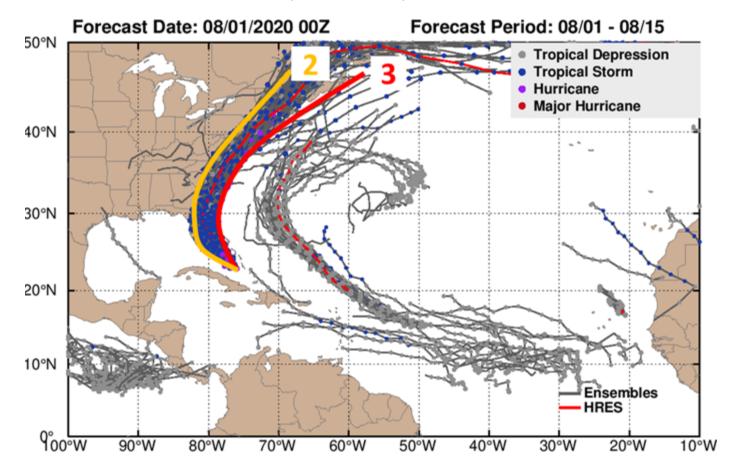
Subject: Hurricane Isaias Update 8/1/2020

Hello everyone,

Isaias is currently a Category 1 hurricane, located 200 miles southeast of Miami, FL, and will track northwest today, then turn north Sunday.

Beyond Sunday, there are still two main track options (roughly equally likely to occur), mainly a function of intensity. (NUMBERS CORRESPOND TO THE MAPPED TRACKS BELOW, overlaid with the European Ensemble member predictions):

- 1. (NOT EXPECTED) Isaias takes a southerly track as a weaker storm, affected by Hispaniola's and also Cuba's mountains, and dissipates after crossing Florida.
- 2. (LIKELY) Isaias maintains Category 1 hurricane strength and sideswipes Florida Sunday, then hugs the coast Monday into Wednesday while weakening. Our area would see heavy rainfall and possibly gusty winds and system impact similar to Tropical Storm Fay on 7/10/2020 in a worst case scenario.
- 3. (LIKELY) Isaias continues to intensify and turns before affecting Florida Sunday, then curves out to sea through next week. Our area would see heavy rainfall but no impact.



Some combination of tracks 2 and 3 is most likely to occur. This will likely result heavy rainfall as Isaias interacts with a cold front approaching the area. Based on the latest information, impactful winds are expected to remain offshore and away from the Con Edison / O&R area. If Tropical Storm force winds do occur across the area, the arrival time of the worst case scenario is roughly 1200 on Tuesday, 8/4/2020. Therefore, by noon today it appears we will be at the 72 hour window. THIS IS STILL SUBJECT TO CHANGE BASED ON ISAIAS'S FORWARD SPEED, WHICH IS MEDIUM CONFIDENCE AT THIS TIME.

Uncertainty remains in how Isaias will interact with Florida, but

- 1. Confidence is high Isaias will track up the coast.
- 2. Confidence is medium and increasing the ConEd/O&R area will see very heavy rainfall Monday night into early Wednesday morning (1-4").
 - a. Heavy rainfall may result in flash flooding of urban and low lying areas.
- 3. Confidence is high that major coastal flooding / storm surge flooding will NOT occur in the NYC area.
- 4. Lowest confidence is with peak winds which are dependent on Isaias's track, intensity, and structure.
 - a. Tropical Storm force winds are NOT expected across the ConEd/O&R areas at this time.

Updates will be sent as needed, and at minimum once per day. Please let me know if you have any questions. -Brian

Brian Cerruti
Meteorologist
System & Transmission Operation

Phone: Cell: Alt:

Sent: Saturday, August 1, 2020 9:51 AM **To:** dl - Weather Risk Assessment

Subject: Weather Risk Assessment and Forecast 8/1/2020

MAIN POINTS:

- 1. Hurricane Isaias is expected to track near or over the area Tuesday into early Wednesday morning:
 - a. Tropical Storm force winds are not expected in the ConEd or O&R areas at this time.
 - b. Biggest threat will be very heavy rainfall, 1-4" by Wednesday morning.
 - c. Gusty winds up to 35 mph are expected, but only along the coast.
 - d. Confidence is medium in this system's exact track and intensity.
 - e. Confidence is low in peak winds at this time due to uncertainty in the system's structure as it crosses the area.

Weather Forecast for 8/1/2020

Day	Morning Low	Afternoon High	Winds (mph)	Clouds/Weather		
Today	-	83-88	5-15 gusts to 20	Increasing clouds.		
Sunday	O&R: 67-72	85-90	O&R: 5-15 gusts to 25	Mostly cloudy skies with scattered showers and		
Sunday	NYC: 72-77	85-90	NYC: 10-20 gusts to 30	isolated thunderstorms.		
Monday	O&R: 65-70	85-90	E 15 guete to 25	Increasing clouds with isolated showers and		
ivioliday	NYC: 70-75	65-90	5-15 gusts to 25	thunderstorms, mainly after 1600.		
Tuesday	O&R: 65-70	73-78	O&R: 5-15 gusts to 25	Cloudy with periods of rain and embedded		
Tuesday	NYC: 70-75	73-76	NYC: 15-25 gusts to 35	thunderstorms. Rainfall will be heavy at times.		
Wednesday	O&R: 62-67	80-85	5-15 gusts to 20	Cloudy with periods of rain in the morning, then		
vveuriesuay	NYC: 67-72	80-85	5-15 gusts to 20	decreasing clouds. Storm total rainfall 1 – 4".		
Thursday	O&R: 60-65	78-83	E 1E quete to 20	Increasing alouds		
Thursday	NYC: 65-70	/0-83	5-15 gusts to 20	Increasing clouds.		
Eridov	O&R: 60-65	78-83	E 1E quete to 20	Mostly cloudy		
Friday	NYC: 65-70	/8-83	5-15 gusts to 20	Mostly cloudy.		

SYNOPSIS:

Expect cloudy skies with scattered showers and this morning, then decreasing clouds in the afternoon and evening as a colds front exits the area. Increasing clouds are expected Saturday as a broad low pressure area approaches the region, with isolated showers arriving after 2000. Cloudy skies and scattered showers and thunderstorms are expected Sunday morning as a warm front lifts across the area. Decreasing clouds are then anticipated Sunday afternoon. A cold front and broad low pressure system will then approach the area Monday, resulting in increasing clouds with periods of rain arriving late.

Hurricane Isaias will interact with this system, affecting our area Tuesday with the primary threat being heavy rainfall – see the Tropical Update for more information. Behind this system, expect decreasing clouds Wednesday evening as the system exits the area. Mostly cloudy skies are then expected Thursday and Friday.

TROPICAL UPDATE:

Hurricane Isaias is currently located about 200 miles southeast of Miami, FL. This system will cross the Bahamas today, then approach the Florida coast Sunday. Isaias will then be absorbed by a low pressure system stalled across the

Midwestern U.S., which will force the storm to track up the coast. **Confidence is high Isaias will track up the eastern U.S. coast.**

A cold front will absorb Isaias Tuesday into Wednesday as it passes closest to our area. The latest data suggests widespread heavy rain will occur Tuesday with breezy winds confined to coastal areas. How Isaias interacts with the front will determine how gusty winds are, which is low confidence at this time. Tropical Storm force winds are not expected at this time. However, confidence is high heavy rainfall will occur and that the system will be far enough away to avoid storm surge/ coastal flooding.

	Weather Risk Assessment									
COMPANY TRIGGERS	Saturday 8/1/2020	Sunday 8/2/2020	Monday 8/3/2020	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020				
4	Precipitation Precipitation									
Rain Trigger (3/4" in 3 hours)				Becoming Likely						
		Th	understorms			•				
T-Storms / Lightning Scattered Isolated Embedded After 1600 Embedded										
		Non-Th	understorm W	inds						
Sustained Winds > 25 mph				NYC: Up to 25 mph						
Wind Gusts > 35 mph				NYC: Up to 35 mph						
	Color Legend: Confidence the trigger will be met or exceeded									
Trigger Not Expected To Occur	Low Con Trigger			n Confidence er Occurs	High Cont Trigger (

		Ove	rhead Imp	act Mode	ls		
USE CO	DLOR FOR	Saturday	Sunday	Monday	Tuesday	Wednes day	Thursday
CONFIDE	NCE LEVEL	8/1/2020	8/2/2020	8/3/2020	8/4/2020	8/5/2020	8/6/2020
			Brooklyn/	Queens			
Forecast	ed Job Range			2	E 42 25		3
(Low - Ex	pected - High)				5 - 12 - 25	(4)	
	Routine (< 20)	100%	100%	100%	80%	100%	100%
Probability of	Upgraded (20 - 49)	0%	0%	0%	20%	0%	0%
Impact Level	Serious (50 - 250)	0%	0%	0%	0%	0%	0%
	Full Scale (> 250)	0%	0%	0%	0%	0%	0%
	52 (1)	8	Bronx/Wes	tchester			
	ed Job Range pected - High)			2	10 - 20 - 50		
	Routine (< 30)	100%	100%	100%	60%	100%	100%
Probability of	U pgraded (30 - 109)	0%	0%	0%	40%	0%	0%
Impact Level	Serious (1 10 - 549)	0%	0%	0%	0%	0%	0%
	Full Scale (> 550)	0%	0%	0%	0%	0%	0%
			Staten Is	sland			
	ed Job Range pected - High)				2 - 5 - 12		
	Routine (< 7)	100%	100%	100%	80%	100%	100%
Probability of	Upgraded (7 - 17)	0%	0%	0%	20%	0%	0%
Impact Level	Serious (18 - 59)	0%	0%	0%	0%	0%	0%
	Full Scale (> 60)	0%	0%	0%	0%	0%	0%
		7	Orange and	Rockland			
	ed Job Range pected - High)				10 - 20 - 50		
	Routine (< 40)	100%	100%	100%	80%	100%	100%
Probability of	Upgraded (40 - 80)	0%	0%	0%	20%	0%	0%
Impact Level	Serious (80 - 330)	0%	0%	0%	0%	0%	0%
110000000000000000000000000000000000000	Full Scale (> 330)	0%	0%	0%	0%	0%	0%
			Color Le	gend:			
Hote	Expected	LowCor	fidence	Mediu m C	Confidence	High Con	fid ence

Impact Summary

STEAM SYSTEM IMPACT:

Periods of heavy rain are expected Monday evening into Wednesday early moming as Humicane Isaias makes its closest pass with our area. This system will interact with a cold front, helping to focus heavy rainfall across the area. Therefore, a Rain Trigger is likely Tuesday. Confidence is medium a Rain Trigger will occur.

OVERHEAD IMPACT:

All eyes are currently on Hurricane Isaias and how close it will track to our area. Based on the latest information, the track will be close enough for heavy rainfall and breezy winds along the coast. The exact track, intensity, and structure of Isaias will determine the peak winds, and ultimately, the overhead impact. Low Level overhead impact is possible if winds are a bit stronger than forecast when combined with heavy rainfall. Confidence is medium in the weather and low in the impact forecast at this time.

UNDERGROUND IMPACT:

No underground system impacts are expected.

Weather Risk Assessment and Impact Summary Prepared By:

Brian Cerruti | Meteorologist | Con Edison System Operations |

Sent: Sunday, August 2, 2020 10:11 AM

To: Hellen, Antonis; Brennan, James; Alvarado, Walter; Lewis, Catherine; White, Julius; Sniffen, Matthew;

Smith, Stuart H. (Emerg. Prep.); Diaz-Middleton, Yvette; Hanebuth, Michele; Sanchez, Robert; Peverly,

Frank; Cerruti, Brian J; Columbia, Thomas

Subject: Tropical Storm Isaias Update 8/2/2020

Hello everyone,

TRACK FORECAST UPDATE:

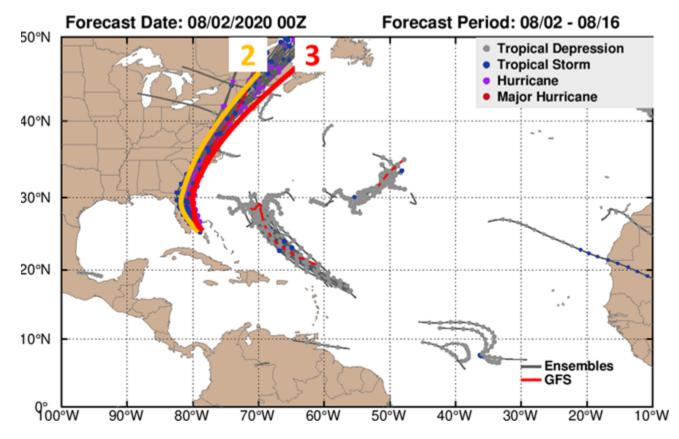
- 1. Isaias is now expected to track a bit further west than yesterday. This will open the door for impactful winds to occur across the ConEd and O&R areas.
- 2. The fast forward speed of Isaias is likely to help preserve its strongest winds as it tracks up the coast.
- 3. Tropical Storm force winds (>39 mph sustained) are now possible across the NYC area, but still not expected inland.

Isaias is currently located about 40 miles east of West Palm Beach, FL and weakened to a Tropical Storm yesterday. This system will track northwest and parallel to the Florida coast today, then turn north tonight and make landfall near Charleston, SC late Monday night, likely as a strong Tropical Storm or possibly Category 1 hurricane.

A cold front will absorb Isaias Tuesday into Wednesday as it quickly crosses our area. The latest data suggests widespread heavy rain will occur Tuesday into Tuesday night and winds are expected to peak Tuesday night into early Wednesday morning. **Tropical Storm force winds are possible in the NYC area** but not expected inland. Isaias will then quickly exit the area Wednesday afternoon while weakening.

There are still two main track options, still mainly a function of intensity. (NUMBERS CORRESPOND TO THE MAPPED TRACKS BELOW, overlaid with the European Ensemble member predictions):

- 1. (NOT EXPECTED) Isaias takes a southerly track as a weaker storm, affected by Hispaniola's and also Cuba's mountains, and dissipates after crossing Florida.
- 2. **(EXPECTED)** Isaias maintains Tropical Storm strength and sideswipes Florida today, then hugs the coast Monday into Wednesday while weakening. **Our area would see heavy rainfall and gusty winds**.
- 3. **(UNLIKELY)** Isaias intensifies back into a hurricane and turns before affecting Florida today, then curves out to sea through next week. Our area would see heavy rainfall but no impact.



Based on the latest information, Track 2 is now most likely to occur due to a westward shift in the latest guidance. This will likely result heavy rainfall Tuesday as Isaias interacts with a cold front approaching the area. Strong gusty winds are also expected as Isaias crosses the area Tuesday afternoon into early Wednesday morning. If Tropical Storm force winds do occur across the area, the arrival time of the worst case scenario is roughly 1200 on Tuesday, 8/4/2020. Therefore, by noon today it appears we will be at the 48 hour window. THIS IS STILL SUBJECT TO CHANGE BASED ON ISAIAS'S FORWARD SPEED, WHICH IS MEDIUM CONFIDENCE AT THIS TIME.

MAIN POINTS:

- 1. Confidence is high Isaias will track up the coast.
- 2. Due to the westward track shift, stronger gusty winds are possible 1200 TUE 0600 WED.
 - a. Tropical Storm force winds ARE POSSIBLE across NYC, not expected inland.
 - b. PEAK WINDS HAVE INCREASED FROM YESTERDAY and are now:
 - i. O&R: Sustained 10-25 mph, gusting 25-40 mph.
 - ii. NYC: Sustained 25-40 mph, gusting 40-55 mph.
- 3. Confidence is high the ConEd/O&R area will see very heavy rainfall Tuesday into early Wednesday morning (1-4").
 - a. Heavy rainfall may result in flash flooding of urban and low lying areas.
- 4. Confidence is high that major coastal flooding / storm surge flooding will NOT occur in the NYC area.

Updates will be sent as needed, and at minimum once per day. Please let me know if you have any questions. -Brian

Brian Cerruti
Meteorologist
System & Transmission Operation
Phone:
Cell:
Alt:

Sent: Sunday, August 2, 2020 10:12 AM

To: dl - Weather Risk Assessment; dl - STO - Weather Forecast

Subject: Weather Risk Assessment and Forecast 8/2/2020

** STRONGER WINDS ARE MORE LIKELY COMPARED TO YESTERDAY'S FORECAST, SEE BELOW**

MAIN POINTS:

- 1. Tropical Storm Isaias is expected to track across the area Tuesday into early Wednesday morning:
 - a. Tropical Storm force winds are possible in the NYC area, not expected for O&R.
 - b. Gusty winds are becoming more likely, peaking 1200 TUE 0600 WED:
 - i. O&R: Sustained 10-25 mph, gusting 25-40 mph.
 - ii. NYC: Sustained 25-40 mph, gusting 40-55 mph.
 - iii. Confidence in the wind forecast is low at this time.
 - c. Heavy rainfall is expected with 1-4" of rain by Wednesday morning.
 - d. Confidence is medium in this system's exact track and intensity.

Weather Forecast for 8/2/2020

Day	Morning Low	Afternoon High	Winds (mph)	Clouds/Weather
Today	-	85-90	O&R: 5-15 gusts to 25 NYC: 10-20 gusts to 30	Mostly cloudy skies with scattered showers and isolated thunderstorms.
Monday	O&R: 65-70 NYC: 70-75	85-90	5-15 gusts to 25	Increasing clouds with isolated showers and thunderstorms, mainly after 1600, becoming a steady rain late.
Tuesday	O&R: 65-70 NYC: 70-75	73-78	Peaking after 1200 O&R: 10-25 gusts 25-40 NYC: 25-40 gusts 40-55	Cloudy with periods of rain and embedded thunderstorms. Rainfall will be heavy at times.
Wednesday	O&R: 62-67 NYC: 67-72	80-85	Peaking before 0600 O&R: 10-25 gusts 25-40 NYC: 25-40 gusts 40-55	Cloudy with periods of rain in the morning, then decreasing clouds. Storm total rainfall 1 – 4".
Thursday	O&R: 60-65 NYC: 65-70	78-83	5-15 gusts to 20	Increasing clouds with scattered showers in the afternoon and evening.
Friday	O&R: 60-65 NYC: 65-70	78-83	5-15 gusts to 20	Mostly cloudy with scattered showers.
Saturday	O&R: 60-65 NYC: 65-70	78-83	5-15 gusts to 20	Mostly cloudy with scattered showers.

SYNOPSIS:

Mostly cloudy skies and scattered showers and thunderstorms are expected Sunday morning as a warm front lifts across the area. Partly cloudy skies are then anticipated Sunday afternoon with an isolated shower or thunderstorm possible. A cold front and broad low pressure system will then approach the area Monday, resulting in increasing clouds with periods of rain arriving late.

Isaias will interact with this system, bringing heavy rain and increasing winds to the area Tuesday. Winds will peak from 1200 TUE – 0600 WED as Isaias crosses the area. Peak gusts up to 55 mph are possible across coastal areas and up to

45 mph inland. Behind this system, expect decreasing clouds Wednesday evening as the system exits the area and the cold front stalls offshore. Mostly cloudy skies are then expected Thursday into Saturday with a chance of showers as the cold front lingers nearby.

TROPICAL UPDATE:

Isaias is currently located about 40 miles east of West Palm Beach, FL and weakened to a Tropical Storm yesterday. This system will track northwest and parallel to the Florida coast today, then turn north tonight and make landfall near Charleston, SC late Monday night, likely as a strong Tropical Storm or possibly Category 1 hurricane.

A cold front will absorb Isaias Tuesday into Wednesday as it quickly crosses our area. The latest data suggests widespread heavy rain will occur Tuesday into Tuesday night and winds are expected to peak Tuesday night into early Wednesday morning. **Tropical Storm force winds are possible in the NYC area** but not expected inland. Isaias will then quickly exit the area Wednesday afternoon while weakening.

		Weather	Risk Assess	ment		
COMPANY TRIGGERS	Sunday 8/2/2020	Mon day 8/3/2020	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020	F riday 8/7/2020
71	111111111111111111111111111111111111111	F	recipitation	2 12	- Antender	
Rain Trigger (3/4" in 3 hours)			177	epected E - 0300 WED		
		Th	understorms			
T-Storms / Lightning	Scattered	Isolated After 1600		bedded E - 0300 WE D		
		Non-Th	understorm W	inds		
		40.	PEAKIN G 12	00 TUE 0600 WED		
Sustained Winds > 25 mph			0&R:	10 - 25 mph		
- 20 lipli		v ×	NYC: 2	25 - 40 mph		
Wind Gusts			0&R: 2	25 - 40 mph		
> 35 mph			NYC: 4	10 - 55 mph		
	Color Legen	d: Confidence	the trigger v	vill be met or exce	eded	
Trigger Not Expected To Occur	Low Cor Trigger	ofidence Occurs		Confidence er Occurs	High Con Trigger (

		Ove	erhead Imp	act Mode	ls		
USE C	OLOR FOR	Sun day	Monday	Tuesday	Wednesday	Thursday	Friday
CONFIDE	NCE LEVEL	8/2/2020	8/3/2020	8/4/2020	8/5/2020	8/6/2020	8/7/2020
			Brooklyn/	Queens			
	ed Job Range			20 6	0 - 100		
(Low - Ex	pected - High)			20-0	0 - 100		
	Routine (< 20)	100%	100%	10%		100%	100%
Probability of	U pgraded (20 - 49)	0%	0%	30%		0%	0%
Impact Level	Serious (50 - 250)	0%	0%	6	0%	0%	0%
	Full Scale (> 250)	0%	0%	(9%	0%	0%
	W		Bronx/Wes	tches t er	100		K
	ed Job Range spected - High)			20 - 5	60 - 1 00		
	Routine (< 30)	100%	100%	0	ēs.	100%	100%
Probability of	U pgraded (30 - 109)	0%	0%	20%		0%	0%
Impact Level	Senous (110 - 549)	0%	0%	1	U%	0%	0%
	Full Scale (> 550)	0%	0%	1	0%	0%	0%
			Staten Is	sland			
	ed Job Range pected - High)			10 - 2	25 - 50		
(=====	Routine (< 7)	100%	100%	1	0%	100%	100%
Probability of	U pgraded (7 - 17)	0%	0%		0%	0%	0%
Impact Level	Serious (18 - 59)	0%	0%	6	0%	0%	0%
	Full Scale (> 60)	0%	0%	1	0%	0%	0%
			Orange and	Rockland			
	ed Job Range pected - High)			25 - 5	0 - 150		
	Routine (< 40)	100%	100%	2	0%	100%	100%
Probability of	U pgraded (40 - 80)	0%	0%	4	0%	0%	0%
Impact Level	Serious (00 - 330)	0%	0%	4	0%	0%	0%
	Full Scale (> 330)	0%	0%	(9%	0%	0%
			Color Le	gend:			
Note	Expected	Low Co	nfidence	Mediu m (Confidence	High Cor	nfid en ce

Impact Summary

STEAM SYSTEM IMPACT:

Periods of heavy rain are expected Tuesday afternoon into Wednesday early morning as Isaias crosses the area. This system will interact with a cold front, helping to focus heavy rainfall across the area. Therefore, a Rain Trigger is expected Tuesday. Confidence is medium a Rain Trigger will occur due to lingering uncertainty in the small storm's track.

OVERHEAD IMPACT:

Isaias is expected to cross the area Tuesday night into early Wednesday moming. Based on the latest information, stronger winds are predicted compared to yesterday, the combination of strong gusty winds, full foliage, and heavy rainfall is expected to yield overhead impact. Confidence is medium in the weather forecast and low in the impact forecast at this time, but Serious overhead impact is becoming likely for all regions.

UNDERGROUND IMPACT:

No underground system impacts are expected.

Weather Risk Assessment and Impact Summary Prepared By:

Brian Cerruti | Meteorologist | Con Edison System Operations |

Sent: Monday, August 3, 2020 9:10 AM

To: Hellen, Antonis; Brennan, James; Alvarado, Walter; Sniffen, Matthew; Lewis, Catherine; White, Julius;

Columbia, Thomas; Smith, Stuart H. (Emerg. Prep.); Hanebuth, Michele; Sanchez, Robert; Peverly,

Frank; Burke, Patrick; Russell, Jonathan

Subject: Isaias Update 8/3/2020

Hello everyone,

TRACK FORECAST UPDATE:

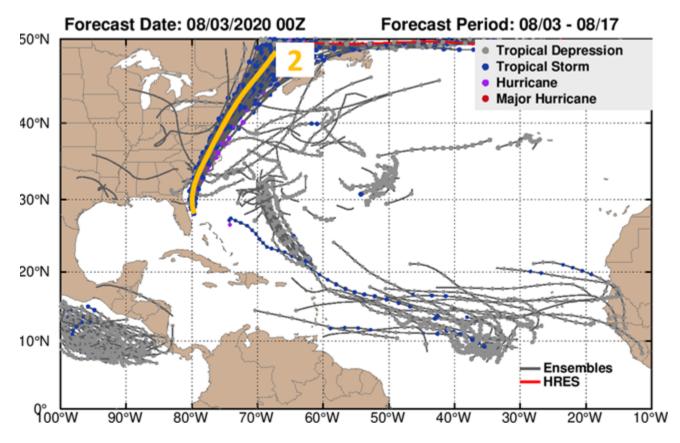
- 1. Isaias is still expected to track over NYC Tuesday night
- 2. The fast forward speed of Isaias is likely to help preserve its strongest winds as it tracks up the coast.
- 3. Tropical Storm force winds (>39 mph sustained) are likely across the NYC area, but still not expected inland.

Tropical Storm Isaias is currently located about 110 miles east of Jacksonville, FL. It will track north today, making landfall near Charleston, SC tonight, likely as a strong Tropical Storm or possibly Category 1 hurricane.

A cold front will absorb Isaias Tuesday into Wednesday as it quickly crosses our area. The latest data suggests widespread heavy rain and strong gusty winds, especially along the coast, will occur Tuesday into Tuesday night. **Tropical Storm force winds are likely in the NYC area** but not expected inland. Isaias will then quickly exit the area Wednesday morning while weakening.

One track is now the favorite based on the latest information. (NUMBERS CORRESPOND TO THE MAPPED TRACKS BELOW, overlaid with the European Ensemble member predictions):

- 1. (NOT EXPECTED) Isaias takes a southerly track as a weaker storm, affected by Hispaniola's and also Cuba's mountains, and dissipates after crossing Florida.
- 2. **(EXPECTED)** Isaias makes landfall in South Carolina tonight as a strong Tropical Storm or Category 1 hurricane, then hugs the coast Tuesday into Wednesday while weakening, tracking over the NYC area Tuesday evening.
- 3. (NOT EXPECTED) Isaias intensifies back into a hurricane and turns before affecting Florida today, then curves out to sea through next week. Our area would see heavy rainfall but no impact.



Based on the latest information, Track 2 is now expected to occur due to consistency in the latest guidance. This will likely result heavy rainfall and strong gusty winds Tuesday afternoon and evening as Isaias interacts with a cold front approaching the area.

The arrival time of the worst case scenario is roughly 1200 on Tuesday, 8/4/2020. Therefore, by noon today it appears we will be at the 24 hour window.

MAIN POINTS:

- 1. Confidence is high Isaias will track up the coast.
- 2. Strong gusty winds are expected 1200 TUE 0000 WED.
 - a. Tropical Storm force winds ARE LIKELY across NYC, not expected inland.
 - b. Winds will vary by location:
 - i. O&R and northern Westchester: Sustained 15-30 mph, gusting 30-45 mph.
 - ii. NYC and southern Westchester: Sustained 30-45 mph, gusting 45-60 mph.
- 3. Confidence is high the ConEd/O&R area will see very heavy rainfall Tuesday:
 - a. O&R: 3-6" of rainfall
 - b. NYC and Westchester: 1-4" of rainfall.
 - c. Heavy rainfall may result in flash flooding of urban and low lying areas.
- 4. Confidence is high that major coastal flooding / storm surge flooding will NOT occur in the NYC area.
 - a. Minor coastal flooding is possible across NYC's most flood prone areas.
 - Water levels of 6.5 7.5 feet above MLLW are expected during high tide Tuesday night at Battery Park.

Updates will be sent as needed, and at minimum once per day. Please let me know if you have any questions. -Brian

Brian Cerruti Meteorologist System & Transmission Operation Phone:

Phone: Cell: Alt:

Sent: Monday, August 3, 2020 9:35 AM

To: dl - Weather Risk Assessment; dl - STO - Weather Forecast

Subject: Weather Risk Assessment and Forecast 8/3/2020

MAIN POINTS:

1. Tropical Storm Isaias is expected to track across the area Tuesday into early Wednesday morning:

Tropical Storm force winds are possible in the NYC area, not expected for O&R.

b. Gusty winds are becoming more likely, peaking 1200 TUE - 0600 WED:

i. O&R: Sustained 10-25 mph, gusting 25-40 mph.

ii. NYC: Sustained 25-40 mph, gusting 40-55 mph.

iii. Confidence in the wind forecast is low at this time.

c. Heavy rainfall is expected Tuesday, heaviest 1200 TUE – 0000 WED:

i. O&R: 3-6" of rainfall

ii. NYC and Westchester: 1-4" of rainfall.

d. Minor coastal flooding is possible Tuesday night in flood prone areas:

i. Peak water levels of 6-5 - 7.5 feet above MLLW at Battery Park.

e. Confidence is high in this system's exact track and intensity.

Weather Forecast for 8/3/2020

Day	Morning Low	Afternoon High	Winds (mph)	Clouds/Weather
Today	-	85-90	5-15 gusts to 25	Increasing clouds with isolated showers and thunderstorms, mainly after 1600, becoming a steady rain late.
Tuesday	O&R: 65-70 NYC: 70-75	73-78	Peaking 1400 - 0000 O&R: 15-30 gusts 30-45 NYC: 30-45 gusts 45-60	Cloudy with periods of rain and embedded thunderstorms. Rainfall will be heavy at times 1200 - 2300.
Wednesday	O&R: 62-67 NYC: 67-72	80-85	Peaking before 0600 O&R: 10-20 gusts 20-30 NYC: 15-25 gusts 30-40	Cloudy with rain tapering off through the early morning, then decreasing clouds. Storm total rainfall 3-6" O&R, 1 – 4" for NYC and Westchester.
Thursday	O&R: 60-65 NYC: 65-70	78-83	5-15 gusts to 20	Increasing clouds with scattered showers in the afternoon and evening.
Friday	O&R: 60-65 NYC: 65-70	78-83	5-15 gusts to 20	Mostly cloudy with scattered showers.
Saturday	O&R: 60-65 NYC: 65-70	78-83	5-15 gusts to 20	Mostly cloudy with scattered showers.
Sunday	O&R: 60-65 NYC: 65-70	82-87	5-15 gusts to 20	Decreasing clouds.

SYNOPSIS:

A cold front and broad low pressure system will approach the area today, resulting in increasing clouds with periods of rain arriving late. Isaias will interact with this system, bringing heavy rain and increasing winds to the area Tuesday. Heaviest rainfall and strongest winds will occur from 1200 TUE – 0000 WED as Isaias crosses the area. Peak gusts up to 60 mph are possible across coastal areas and up to 45 mph inland.

Behind this system, expect decreasing clouds Wednesday afternoon as the system exits the area and the cold front stalls offshore. Mostly cloudy skies are then expected Thursday into Saturday with a chance of showers as the cold front lingers nearby. Decreasing clouds and warmer temperatures are anticipated Sunday as this stalled front finally exits the area.

TROPICAL UPDATE:

Tropical Storm Isaias is currently located about 110 miles east of Jacksonville, FL. It will track north today, making landfall near Charleston, SC tonight, likely as a strong Tropical Storm or possibly Category 1 hurricane.

A cold front will absorb Isaias Tuesday into Wednesday as it quickly crosses our area. The latest data suggests widespread heavy rain and strong gusty winds, especially along the coast, will occur Tuesday into Tuesday night. **Tropical Storm force winds are likely in the NYC area** but not expected inland. Isaias will then quickly exit the area Wednesday morning while weakening.

		Weather Risk As	sessment				
COMPANY TRIGGERS	Monday 8/3/2020	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020	F riday 8/7/2020	Saturday 8/8/2020	
		Precipitati	on	7			
Rain Trigger (3/4" In 3 hours)		Expected 0600 - 2300					
Coastal Flooding (> 7.5° above MLLW)		Minor Flood ing Possible 6.5' - 7.5' MLLW				y.	
	12	Thundersto	rms				
T-Storms / Lightnin g	Isolated After 1800	Embedded 0600 - 2300					
19		Non-Thundersto	rm Winds	12		VA.	
No treat (Indianation)		PEAKING 1200 - 0000	1				
Sustained Winds > 25 mph		O&R: 15 - 30 mph					
> zo mpin		NYC: 30 - 45 mph					
Wind Gusts		O&R: 30 -45 mph					
> 35 mph		NYC: 45 - 60 mph					
	Color Leger	nd: Confidence the trig	ger will be met	or exceeded			
Trigger Not Expected To Occur			Medium Confidence Trigger Occurs		1700-070	High Confidence Trigger Occurs	

		Ov	erhead Impa	ct Models				
USE COLOR FOR		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
CONFIDENCE LEVEL		8/3/2020	8/4/2020	8/5/2020	8/6/2020	8/7/2020	8/8/2020	
			Brooklyn/Q	ueens				
	ed Job Range pected - High)		40 - 80 - 120					
	Routine (< 20)	100%	0%	100%	100%	100%	100%	
Probability of	Upgraded (20 - 49)	0%	20%	0%	0%	0%	0%	
Impact Level	Serious (50 - 250)	0%	70%	0%	0%	0%	0%	
	Full Scale (> 250)	0%	10%	0%	0%	0%	0%	
			Bronx/Westo	hester				
	ed Job Range pected - High)		100 - 250 - 350					
	Routine (< 30)	100%	0%	100%	100%	100%	100%	
Probability of	Upgraded (30 - 109)	0%	10%	0%	0%	0%	0%	
Impact Level	Serious (110 - 549)	0%	80%	0%	0%	0%	0%	
	Full Scale (> 550)	0%	10%	0%	0%	0%	0%	
			Staten Isl	and				
	ed Job Range pected - High)		15 - 30 - 60					
	Routine (< 7)	100%	0%	100%	100%	100%	100%	
Probability of	U pgraded (7 - 17)	0%	10%	0%	0%	0%	0%	
Impact Level	Serious (18 - 59)	0%	70%	0%	0%	0%	0%	
	Full Scale (> 60)	0%	20%	0%	0%	0%	0%	
			Orange and R	ockland				
	ed Job Range pected - High)		60 - 120 - 200					
	Routine (< 40)	100%	0%	100%	100%	100%	100%	
Probability of	U pgraded (40 - 80)	0%	20%	0%	0%	0%	0%	
Impact Level	Serious (80 - 330)	0%	70%	0%	0%	0%	0%	
	Full Scale (> 330)	0%	10%	0%	0%	0%	0%	
			Color Leg	end:				
Not Expected		Low Confidence		Med ium Co	Medium Confidence		High Confidence	

Impact Summary

STEAM SYSTEM IMPACT:

Periods of heavy rain are expected Tuesday as Isaias crosses the area. This system will interact with a cold front, helping to focus heavy rainfall across the area. Therefore, a Rain Trigger is expected Tuesday. **Confidence is high** a Rain Trigger will occur and multiple rain triggers are likely.

OVERHEAD IMPACT:

Isaias is expected to cross the area Tuesday night. Based on the latest information, stronger winds are predicted compared to yesterday. The combination of strong gusty winds, full foliage, and heavy rainfall is expected to yield overhead impact. Confidence is high in the weather forecast and medium in the impact forecast at this time, but Serious overhead impact is expected for all regions.

UNDERGROUND IMPACT:

No underground system impacts are expected.

Weather Risk Assessment and Impact Summary Prepared By:

Brian Cerruti | Meteorologist | Con Edison System Operations |

Sent: Tuesday, August 4, 2020 9:33 AM

To: dl - Weather Risk Assessment; dl - STO - Weather Forecast

Subject: Weather Risk Assessment and Forecast 8/4/2020

MAIN POINTS:

1. Tropical Storm Isaias is expected to track across the area Tuesday into early Wednesday morning:

- a. Tropical Storm force winds are expected in the NYC area and coastal Westchester, not expected for O&R and rest of Westchester.
- b. Gusty winds are becoming more likely, peaking 1200 1700 today:
 - i. O&R and northern Westchester: Sustained 15-30 mph, gusting 35-50 mph.
 - ii. NYC and southern Westchester: Sustained 30-45 mph, gusting 50-65 mph.
 - iii. Confidence in the wind forecast is low at this time.
- c. Heavy rainfall is expected today, heaviest 1200 1700 today:
 - i. O&R: 3-6" of rainfall
 - ii. NYC and Westchester: 1-4" of rainfall.
- d. Isolated minor coastal flooding is possible tonight in flood prone areas:
 - i. Peak water levels of 6-5 7.5 feet above MLLW at Battery Park.
- e. Confidence is high in the forecast.

Weather Forecast for 8/4/2020

Day	Morning Low	Afternoon High	Winds (mph)	Clouds/Weather		
Day	MOITHING LOW	Arternoon right	winus (mpn)			
	-	75-80		Cloudy with periods of rain and embedded		
			Peaking 1200 - 1700	thunderstorms. Rainfall will be heavy at times,		
Tuesday			O&R: 15-30 gusts 35-50	especially 1200 – 1700 as a rain band crosses the		
			NYC: 30-45 gusts 50-65	area. Storm total rainfall 3-6" O&R, 1 – 4" for NYC		
				and Westchester.		
	000.62.67		Peaking before 0600			
Wednesday	O&R: 62-67	82-87	O&R: 10-20 gusts 20-30	Decreasing clouds.		
	NYC: 67-72		NYC: 15-25 gusts 30-40			
Thursday	O&R: 60-65	70.03	5 45t- t- 20	Increasing clouds with scattered showers in the		
Thursday	NYC: 65-70	78-83	5-15 gusts to 20	afternoon and evening.		
Fuiden	O&R: 60-65	70.02	5 45t- t- 20	Backly aloudy with coattoured showing		
Friday	NYC: 65-70	78-83	5-15 gusts to 20	Mostly cloudy with scattered showers.		
Caturdan	O&R: 60-65	78-83	F 45t- t- 20	Na selle slavele vitel assettant del serve		
Saturday	NYC: 65-70		5-15 gusts to 20	Mostly cloudy with scattered showers.		
Cde	O&R: 60-65	02.07	5.45	Marsh, Jane		
Sunday	NYC: 65-70	82-87	5-15 gusts to 20	Mostly cloudy.		
D. Company	O&R: 60-65	02.07	- 4	Mostly cloudy with isolated showers and		
Monday	NYC: 65-70	82-87	5-15 gusts to 20	thunderstorms		

SYNOPSIS:

A cold front and broad low pressure system will approach the area today, resulting in increasing clouds with periods of rain arriving late. Isaias will interact with this system, bringing heavy rain and strong gusty winds to the area Tuesday.

Heaviest rainfall and strongest winds will occur from 1200 – 1700 today as Isaias crosses the area. Peak gusts up to 65 mph are possible across coastal areas and up to 50 mph inland.

Behind this system, expect decreasing clouds Wednesday as the system exits the area and the cold front stalls offshore. Mostly cloudy skies are then expected Thursday into Saturday with a chance of showers as the cold front lingers nearby. Decreasing clouds and warmer temperatures are anticipated Sunday as this stalled front finally exits the area.

TROPICAL UPDATE:

Isaias regained hurricane strength and made landfall last night near the NC/SC border. It has since weakened to a Tropical Storm and is currently located about 40 miles east of Richmond, VA. A cold front will absorb Isaias today into Wednesday as it quickly crosses our area. The latest data suggests widespread heavy rain and strong gusty winds, especially along the coast, will occur 1200 – 1700 today. Tropical Storm force winds are expected in the NYC area but not expected inland. Isaias will then quickly exit the area tonight while weakening.

	We	eather Risk Ass	ess ment		100	
COMPANY TRIGGERS	Tuesday 8/4/2020	Wednesday 8/5/2020	Thursday 8/6/2020	Friday 8/7/2020	Saturd ay 8/8/2020	Sunday 8/9/2020
		Precipitatio	n		Ni 121	
Rain Trigger (34" In Shoure)	Expected 1200 - 1700					
Coastal Flooding (> 7.5' above MLL'W)	Min or Flooding Possible 5.5' - 7.5' MLLW					
1		Thunderstor	ms			
T-Storms / Lightning	Embedded 1200 - 1700					
Severe T-Storms (Gusts >58 mph, Hall > 1", or Tornadoes)	Isolated, brief 1200 - 1700					
	N	lon-Thunderstori	m Winds			
Sustained Winds > 25 mph	PEAKIN G 1200 - 1700 O&R: 15 - 30 mph NYC: 30 - 45 mph			.2		
Wind Gusts > 35 mph	O&R: 35 - 50 mph NYC: 50 - 65 mph			5		
	Color Legend: Conf	idence the trigg	er will be met	or exceeded		
Trigger Not Expected To Occur	Low Confidence Trigger Occurs		Medium Confidence Trigger Occurs		High Confidence Trigger Occurs	

From: Cerruti, Brian J

Sent: Tuesday, August 4, 2020 8:27 AM

To: Hellen, Antonis; Brennan, James; Alvarado, Walter; Sniffen, Matthew; White, Julius; Lewis, Catherine;

Columbia, Thomas; Smith, Stuart H. (Emerg. Prep.); Burke, Patrick; Hanebuth, Michele; Peverly, Frank;

Sanchez, Robert; Diaz-Middleton, Yvette; dl - STO Senior Sys. Operators

Subject: Isaias Update 8/4/2020

Hello everyone,

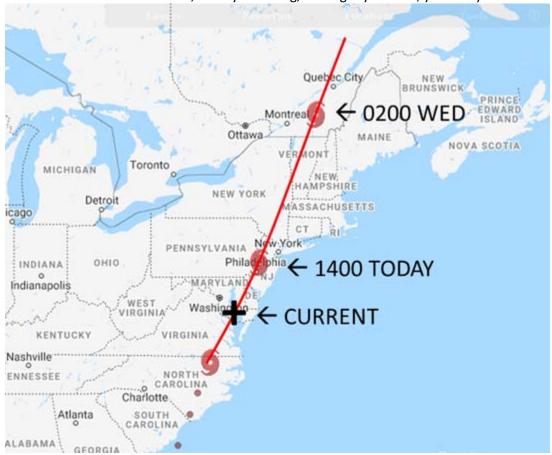
TRACK FORECAST UPDATE:

1. Isaias is now expected to track just west of NYC this evening.

- 2. The fast forward speed of Isaias is likely to help preserve its strongest winds as it tracks up the coast.
- 3. Tropical Storm force winds (>39 mph sustained) are expected across the NYC area starting 1200 today, but still not expected inland.

Isaias regained hurricane strength and made landfall last night near the NC/SC border. It has since weakened to a Tropical Storm and is currently located about 40 miles east of Richmond, VA. A cold front will absorb Isaias today into Wednesday as it quickly crosses our area. The latest data suggests widespread heavy rain and strong gusty winds, especially along the coast, will occur 1200 – 1700 today. Tropical Storm force winds are expected in the NYC area but not expected inland. Isaias will then quickly exit the area tonight while weakening.

Here is the latest track forecast, closely following, but slightly west of, yesterday's track:



The arrival time of Tropical Storm force winds in NYC is roughly 1200 today.

MAIN POINTS:

- 1. Isaias will track up the coast.
- 2. Strong gusty winds are expected 1200 1700 today.
 - a. Tropical Storm force winds ARE EXPECTED across NYC, not expected inland.
 - b. Winds will vary by location:
 - i. O&R and northern Westchester: Sustained 15-30 mph, gusting 35-50 mph.
 - ii. NYC and southern Westchester: Sustained 30-45 mph, gusting 50-65 mph.
- 3. Confidence is high the ConEd/O&R area will see very heavy rainfall:
 - a. Heaviest rainfall will occur from 1200 1700 today.
 - b. O&R: 3-6" of rainfall
 - c. NYC and Westchester: 1-4" of rainfall.
 - d. Heavy rainfall may result in flash flooding of urban and low lying areas.
- 4. Confidence is high that major coastal flooding / storm surge flooding will NOT occur in the NYC area.
 - a. Minor coastal flooding is possible across NYC's most flood prone areas.
 - b. Water levels of 6.5 7.5 feet above MLLW are expected during high tide Tuesday night at Battery Park.

Updates will be sent as needed, and at minimum once per day. Please let me know if you have any questions.
-Brian

Brian Cerruti
Meteorologist
System & Transmission Operation
Phone:
Cell:

Alt:

		Overl	nead Impac	t Models				
USE COLOR FOR		Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
CONFIDENCE LEVEL		8/4/2020	8/5/2020	8/6/2020	8/7/2020	8/8/2020	8/9/2020	
			Brooklyn/Que	eens				
Forecast	ed Job Range	50 - 120 - 200						
(Low -Ex	pected - High)	30 - 1 2 0 - 2 00						
	Routine (< 20)	8%	100%	100%	100%	100%	10 0%	
Probability of	Upgraded (20 - 49)	10%	0%	0%	0%	0%	0 %	
Impact Level	Serious (50 - 250)	80%	0%	0%	0%	0%	0 %	
	Full Scale (> 250)	10%	0%	0%	0%	0%	0 %	
			Bronx/Westch	ester				
	ed Job Range pected - High)	150 - 250 - 350						
	Routine (< 30)	#%	100%	100%	100%	100%	10 0%	
Probability of	Upgraded (30 - 109)	10%	0%	0%	0%	0%	0 %	
Impact Level	Serious (110 - 549)	80%	0%	0%	0%	0%	0%	
	Full Scale (> 550)	10%	0%	0%	0%	0%	0 %	
			Staten Islar	nd				
Forecast	ed Job Range	30 00 00						
(Low -Ex	pected - High)	30 - 60 - 90						
	Routine (< 7)	0%	100%	100%	100%	100%	10 0%	
Probability of	Upgraded (7 - 17)	0%	0%	0%	0%	0%	0 %	
Impact Level	Serious (18 - 59)	50%	0%	0%	0%	0%	0 %	
	Full Scale (> 60)	50%	0%	0%	0%	0%	0%	
		0	range and Ro	ckland				
	Forecasted Job Range (Low - Expected - High)							
	Routine (< 40)	8%	100%	100%	100%	100%	10 0%	
Probability of	Upgraded (40 - 80)	20%	0%	0%	0%	0%	0 %	
Impact Level	Serious (80 - 330)	70%	0%	0%	0%	0%	0%	
	Full Scale (> 330)	10%	0%	0%	0%	0%	0 %	
Color Legend:								
Acti	: xperted	Low Confi	dence	Medium Confidence		High Co	High Confidence	

Impact Summary

STEAM SYSTEM IMPACT:

Periods of heavy rain are expected from 1200 - 1700 as Isaias's main rain band crosses the area. **Confidence is high** a Rain Trigger will occur and multiple rain triggers are possible.

OVERHEAD IMPACT:

Isaias will cross the area today. Based on the latest information, stronger winds are predicted compared to yesterday once again. The combination of strong gusty winds, full foliage, and heavy rainfall is expected to yield overhead impact. Confidence is high in the weather forecast and medium in the impact forecast at this time, but Serious overhead impact is expected for all regions. Confidence in the impact forecast is lowest for Staten Island, where Full Scale impact may occur.

UNDERGROUND IMPACT:

No underground system impacts are expected.

Weather Risk Assessment and Impact Summary Prepared By:

Brian Cerruti | Meteorologist | Con Edison System Operations |